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Notes from the Profession.

FAILURES IN ARTIFICIAL DENTURES.

DR. L. P. HASKELL, CHICAGO.

The *chief* cause of failures is largely overlooked, viz.: faulty articulation, and which can often be remedied by a few minutes' grinding, but more often a re-arrangement of the teeth is necessary.

If the plate comes in close contact with the membrane, excepting over the hard palate, where it should always be raised slightly to prevent future rocking and irritation, there will be sufficient adhesion. The vacuum cavity is non-essential, and in hard mouths often defeats its object by allowing the plate to bear on the hard palate, anterior and posterior to the margin of the vacuum cavity.

In the arrangement of the upper teeth, attention must be given to the anterior teeth first, placing them in such position that the lower will never meet them, otherwise there will be trouble by tipping from behind. To be sure, patients sometimes get used to the displacement of the plate from this cause, learning to control it, involuntarily with the tongue, but I have observed they are always glad to find relief, which can often be secured by grinding either the upper or lower teeth.

Another difficulty often arises from an unbalanced plate, the teeth being longer one side than the other, or rather meeting quicker. This sometimes occurs from the fact that all the lower teeth on one side are missing, while on the opposite side are one or two bicuspids. This trouble can be relieved only by the extraction of these one or two bicuspids and the insertion of a partial plate, so as to throw the pressure equally on both sides; any *sentiment* as to the extraction of sound teeth to the contrary notwithstanding. It is simply a question of comfort and usefulness of the inevitable denture which must be worn.

Another point to be guarded against is a lower third molar; sometimes a second molar, on one or both sides, which, from the loss of anterior molars, have pitched forward to an angle of forty-five

degrees. An upper artificial tooth meeting this *surface* results in crowding the plate forward, consequently they should never meet, unless the tooth can be set directly on top, or to the rear where it would form a *catch*.

When the surfaces of the lower bicuspids, if they are the only posterior teeth remaining, form an inclined plane, they should be ground, or filled, or capt, so as to present a flat surface.

In lower sets, care should be taken to prevent undue pressure at the ends of the plate. This is a very common fault; the result of which is serious irritation of the membrane, as well as displacement of the plate. I have noticed that the dentist often fails to realize how to properly remedy it. He keeps filing away the plate instead of grinding the teeth.

Another cause of trouble with lower sets arises from making the plate too deep, either on the inner or outer margins, sometimes on both, causing constant displacement by the action of the muscles; better be too narrow than too deep.

Sometimes the teeth and gums are made too full in front, causing not only too much fulness of the lip, but the muscles become so drawn against the denture as to constantly force it backward, in those mouths when the process is all gone, for there is nothing to prevent this movement.

Additional weight in lower sets seems to be absolutely necessary in such cases, though I am not sure but the weight in some mouths causes additional absorption.

In the articulation of partial lower sets with an upper, only the lower anterior teeth remaining, the pressure should always be on the artificial, so as to relieve pressure on the front teeth.

But, if there are natural teeth on the upper jaw, lower partial sets should never be articulated in such a way as to throw the pressure on them, as there will be constant irritation of the jaw, because the jaws will close firmer on natural than on artificial teeth.

In articulating partial upper sets of scattered teeth, throw the pressure on the natural teeth entirely, as pressure on narrow spaces of the gums always irritates. Besides, the artificial denture can be used more successfully.

Whenever your own or another's patient calls and complains of the plate loosening, always examine the articulation first. When a plate has been worn many years, the bearings change, and in such a way as to cause displacement. Sometimes grinding will remedy it, and sometimes it will be necessary to remove the occluding teeth and lengthen them, if it is a rubber set; if continuous gum, the ends of these teeth can be built up with porcelain.

When the lower jaw is prominent and the most of the teeth remain, the upper front teeth should be arranged even with, but not to meet; or placed inside the lower; the bicuspids and molars a little inside the outer cusps, and the bearing mainly on the inner cusps, to throw the pressure toward the inside the alveolar ridge.

If the fronts are set *inside* the lower teeth, they may meet, the pressure in that case being favorable.

Very many sets of teeth are too short; rarely have I seen them too long. This not only gives a bad expression to the mouth, but often causes discomfort by allowing the lower jaw to come too far forward, vainly reaching for a resting place, and producing a tired feeling, and preventing successful mastication.

With many patients, however, all the conditions of the mouth are unfavorable to the successful use of artificial teeth, and such patients wonder why they can't at once use teeth as their neighbors do. With such, the dentist must use his best judgment, looking at the difficulties in all their bearings, sparing no pains to do his best, and then explain the difficulties, and give them to understand that they must exercise much patience, and that in time they will learn to use them successfully.

One point, however, must be insisted on: If the plate irritates, go at once to the dentist to have it relieved, for aside from the pain suffered, you cannot masticate successfully under such conditions, for, in closing the jaws, you will endeavor to close in such a way as to avoid being hurt, and thus the plate is displaced.

IRREGULARITIES.

DR. J. E. ROBINSON.

(Read Before the Cleveland Dental Society.)

Many operators of good repute claim that nature, if undisturbed, will take care of the teeth in their growth and proper location, as well as all other physical developments, and that nothing further is required than to see that the deciduous teeth are retained to the utmost limit of possibility, to force a proper expansion of the arches of the mouth during the growth and eruption of the permanent or second dentition.

Some others, of no mean pretensions, have pronounced in favor of an early removal of the deciduous teeth, claiming that quite early in embryonic life the germs of some—and one quite eminent writer claims at birth as many as twenty-four—of the permanent teeth are located and ready for, and in process of, calcification; and if when developed and ready for eruption the absorption of the deciduous teeth is not delayed, thereby causing a struggle between them for posi-

tion, there will be as few irregularities developed in the permanent as is found in the deciduous teeth. Their remedy is to watch closely, and if a lack of room presents itself, cause the removal of one or more of the permanent teeth, notably the "sixth year molars," thereby gaining the needed room, and by frequent daily pressure by the patient forward or backward, as required, compel the advancing tooth to take its proper place in the arch.

While each of these treatments is sometimes justifiable, I think we must generally, in all but the simplest cases, resort to surgical skill and mechanical force to assist nature to a proper development or arrangement. My reasons for this are that the causes of irregularities, or I might better say the cause, in a very large majority of cases, is of more remote origin than the simple premature or retarded eruption of a permanent tooth. We must study the laws of heredity if we would find the most prolific cause of irregularities. In all but man care is taken that the physical characteristics of both father and mother are sufficiently in harmony to produce offspring well developed and of fair proportions, and with rare exceptions the end sought is attained.

With man little thought is given to posterity when choosing partners for life. We are guided by a sentiment called love, and, physically, fit or unfit, we mate and reproduce our kind.

I have no quarrel with our method, indeed would not have it otherwise. Still the fact remains that the robust man, with massive jaw and teeth of corresponding proportions, quite often weds the woman of slight frame and slighter dental formation. In fact I believe we are oftenest charmed to wedlock by those of opposite physical and mental characteristics, and as a result a perfectly regular dentition is seldom produced. To be sure, in a great number of cases, the deformity is not sufficient to need attention at our hands, and passes unnoticed. Dentists have many times been called on to give advice and treat cases where the large teeth of one patient were encased in the small jaw of the other, and *vice versa*. In the first we get the crowded condition to which our attention is most frequently called. When the inheritance is of the last, we get the teeth with considerable space between, which is less unsightly, and less attention is given them.

It may be in old settled communities, where the population is not composed so largely of an admixture of races, this cause of irregularities is less frequently met. I apprehend that our brethren in the old world are much less frequently called on to render professional services in this important and constantly growing branch of our practice.

Much diversity of opinion prevails as to the proper age to commence. My judgment is that all other things being favorable, it is

better to commence as young as possible, as then the bony structure yields more readily, the absorption, under the stimulus of pressure, is greater, and the filling up in the track of the moving teeth is more rapid.

Intermittent pressure is generally to be preferred to continuous, as we are much less liable to overdo when, through failure of the patient to keep appointments, the pressure is not removed or slackened at the proper time. Again, with intermittent pressure, the severe pain soon subsides after the dismissal of the patient, and the operator is less liable to have his work undone or retarded through the mistaken kindness of the tender hearted parent or guardian, by removing the appliance to give relief. The getting the teeth in situation is a trifle slower, but we are compensated by a firmer condition when we are ready to place our retaining plate or band on them, and really no time is lost.

Though invention is necessary, it is not as indispensable now in preparing appliances as formerly, as we have our Keely, Kingsley, Coffin, Patrick, Farrar, Talbot and others who have invented and given to the profession forms that with slight modifications and combinations, one with the other, almost any change in position can be accomplished. First, study well our case, and after determining well the method of procedure, avail yourselves of these unpatented, and, in too many instances, unacknowledged gifts of noble men, always bearing in mind that the simpler the contrivance can be made and do its work the better the result, as thereby the liability to discouragement and perhaps abandonment is, in a great measure, prevented.

You must have a perfect antagonizing model of the mouth before attempting any change. In the many cases to which my attention has been called by model, but few have paid any attention to getting more than an impression of the teeth and their articulation, one jaw with the other.

Dr. Keely, of Oxford, who has made the correcting of irregularities a specialty of late, is particularly careful to obtain, in addition to a good articulating model, a perfect impression of the gum to the utmost limit, as then not only the erupted teeth, but those in process of eruption, can be considered. I find so much more can be learned from a model taken as indicated, that I make it conspicuous.—*Dental Register.*

There is nothing so delightful as the hearing or the speaking of truth. For this reason, there is no conversation so agreeable as that of the man of integrity, who hears without any intention to betray, and speaks without any intention to deceive.—*Plato.*

ROOT FILLING AT ONE SITTING.

DR. J. G. HARPER, ST. LOUIS.

Usually the diagnosis of the death of the pulp is not difficult. As a rule, the case is not brought to the attention of the dentist till there have been changes of a decided character,—soreness of the tooth and the formation of pus. Those that have not progressed so far are the most difficult to diagnose. For example, the patient complains of some uneasiness in the tooth; there is a slight pain on pressure, and hot drinks give pain; cold gives relief. The most obscure cases are those that give no trouble, and the only indications are the peculiar properties of the dentine, noted during excavating.

Having diagnosed a dead pulp, the next step is the treatment, and the introduction of peroxide of hydrogen has almost *revolutionized* our practice in the class of teeth under consideration. This agent aids us in thoroughly removing the *debris* from all accessible root canals; even those only admitting the finest broach may be cleaned. The belief that this agent would thoroughly remove all dead or septic matter from the pulp canal at one sitting, induced me to make the venture. The belief that the removal of the dead pulp antiseptically was all the treatment necessary induced me to fill the pulp canals immediately.

TREATMENT.

This plan of treatment, which I have followed for about three years, was given in the *Archives of Dentistry*, vol. III, page 133, and is as follows: Apply on cotton peroxide of hydrogen, after removing all the putrid mass you can with a broach; continue to apply H_2O_2 , till there cease to be any bubbles; apply iodoform, dry the cavity, fill the canal with gutta-percha, and the tooth with gold. This is taken from a history of my first case, operated on in September, 1884. The tooth was the upper left central. On the following day I treated the other central in the same jaw, and in the same manner. The latter tooth had the pulp canal filled with pus; the former with a moist, cheesy mass. Neither tooth had a fistula. Both teeth were perfectly comfortable after being treated and filled at one sitting, and have remained so till now.

Dr. C. T. Stockwell, Springfield, Mass., read a paper, "The Treatment and Filling of Root Canals at a Single Sitting," before the Vermont State Dental Society, at its tenth annual meeting, March, 1886, published in *Archives of Dentistry*, vol. III, page 193. He says: "As far, however, as I am informed at this writing, no one else has attempted to treat those cases in accordance with the method adopted by myself some eight or ten months since, save one or two personal friends to whom I communicated the process of treatment,

and who are as enthusiastic in its favor as I can well be." At the foot of the page appears the following foot-note: "Since the above was written I have noticed an editorial in the *Archives of Dentistry*, March number, that gives practically the same method." The above is not given for the purpose of claiming priority, but simply to show that but little, if anything regarding this treatment, has been given to the profession till recently.

Recognizing the benefits to be derived from this method of practice, I am doing what little I can to convey to others this mode of treatment, being sure that if the subject is given a little thought its practicability will be recognized.

Dr. A. C. Schell, Independence, Mo., read a paper before the Kansas City Dental Society, Feb. 16th, 1887, from which I take the following: "I treat and fill at the same sitting if there is dead pulp. I once thought when I found a decomposed pulp the tooth should be treated a number of times before filling; but this is unnecessary, from the fact that when you have removed a dead pulp, washed and disinfected the canal, where there is no abscess, you remove the exciting cause of trouble, and nothing more is necessary but to fill at once. Teeth can be treated to destruction, and the less we do of it the better results will be obtained."—(*Western Dental Journal*, Vol. I, page 119.) The doctor should go a step further, and not let an abscess prevent filling at once. The abscess will generally heal, though not treated from the exterior.

Dr. Stockwell, in a private letter to me, says: "In regard to the success of my method of treating and filling abscessed teeth at one sitting, as set forth in the May number, 1886, of the *Archives of Dentistry*, I have to say, after a year further of experience, that it is eminently successful. Thus far, I have no occasion to modify my practice in the least." I also have many letters from others in different parts of the country who have adopted the method, that bear uniform testimony to the pleasure and satisfaction that their authors have derived from the practice of this method. In fact, in no case where it has been tried have I any knowledge of any other than the most favorable and satisfactory results. Peroxide of hydrogen is not always at hand, and is not absolutely necessary. Use instead a solution of bichloride of mercury, 2 grs. to the ounce of water, to wash out the pulp chambers; then dry by washing with alcohol, which evaporates by means of hot air; then fill the roots with liquid gutta-percha, containing iodoform, a dram to the ounce. This may be modified by introducing iodoform into the root canals, using a solution, a dram to an ounce of alcohol, which dissolves best a small quantity, necessitating shaking the bottle before using. The alcohol may be driven off by

heat, as described before; then fill the roots with gutta-percha, nerve canal points and the pulp chamber with cement, and the remainder of the cavity as you see it. If there is much tenderness, defer the permanent filling till the inflammation has subsided.

A few say this method fails in their hands; no doubt this is caused by carelessness.

This is antiseptic treatment. I gave the practical side of the question; the theoretical part is no doubt familiar to all. I conclude by recommending all to adopt this plan of treatment, on the evidence and recommendation of nearly all who have tried it.—*Western Dental Journal.*

ASEPTIC SPONGE FOR PULP GRAFTING.

DR. T. H. PARRAMORE, HAMPTON, VA.

(Read before the Southern Dental Association, Old Point Comfort, September, 1887.)

In the treatment of disease, I am inclined to the opinion that we too often disregard hints given us by our great teacher, nature. The same supreme being, and the same laws govern the animate universe.

What is man but an aggregation of cells in various and varied stages of development? What builds our tissues? Is it not the white-blood-corpuscle? This wonderful little builder rushes through our arteries and capillaries to the tissue for which it is destined, and, under various environement, is transformed into bone, muscle, teeth, hair, etc., as the Great Architect designs. This truth, and the fact that the blood is constantly filled with these corpuscles, I regard of great practical importance to us in the practice of our specialty. If we place a drop of sea-water under a microscope, we find it filled with living bodies, spawn or spat, the germ, blasteme, of the fish. Myriads of these microscopic bodies, quivering with life, become nothing more than what we behold them, dancing in the drop of water. Why is this? I answer, they have not the proper environment. Fasten a piece of wood (better with the bark on) in any of these waters, and after a few days it will be found covered with these spawn, which may be followed through all the stages to perfect development; suspend a sponge in this water and these little fellows will cling to every film of it. Are not these mighty rivers and arms of the sea arteries of the beautiful green earth we inhabit? Are not the white-blood-corpuscles found in our arteries prototypes, in a measure, of the bodies that inhabit every drop of the water of these mighty arteries? If then this spawn only requires protection and assistance to reach its highest development, might not the same reasonably be predicted of the white-blood-corpuscle? That such is fact, I think can be, and *has* been demonstrated in what is known as "Sponge Grafting." What is inflammation? "An irritation in a part of the body occasioned by some

stimulus ; owing to which the blood flows into the capillary vessels in greater abundance than natural, and these vessels become overdilated and enfeebled, whence result pain, redness, heat, tension, swelling, etc." I have quoted from "Dunglison's Medical Dictionary," that every authority I have consulted puts an *increased flow of blood* to the point of irritation as the first result of the irritation is the important point in this connection. For what purpose does the blood flow to this point? Is it to aggravate, to increase the trouble already working destruction to the tissues involved? Are the members of our bodies divided against themselves, one battling against the other, or is this an effort of nature to repair the injury, and is the object of this increased flow of blood to the point of irritation the supply of material with which to carry on the process of repair? Obviously, the purpose of this flow of blood is repair or tissue building. Usually it is successful, the degree of success depending largely on the condition of each case ; on the ability of the subject to apply the white-blood-corpuscule and its protoplasmic pabulum to the repair of the injury. The surgeon or dentist who renders nature most efficient aid in this effort is most nearly fulfilling the purpose of his calling.

Now I reach the practical part of my subject. We are all familiar with the effort of the pulp to protect itself against encroachment on its domain of either abrasion or caries. In extirpating pulps that have died slowly, we usually find "pulp-stones," indicating an abortive effort at self-protection. It is on this physiological peculiarity we depend largely for success in treating exposed pulps. What we wish to accomplish is the deposition of secondary dentine at the point of exposure, and not in the body of the pulp as often happens.

What conditions are we called on to treat when we find a nerve exposed? We have an irritation that causes an increased flow of blood, bringing its rich freight of white-blood-corpuses. Let us place our aseptic sponge at the point of exposure, seize on these little bodies, fasten them to every fiber of this sponge, cement them with fibrin and nourish them with protoplasm till the whole becomes an adamantine barrier, behind which our delicate pulp may securely rest, fearless of molestation by drill or broach. I have used aseptic sponge exclusively in capping exposed pulps, for six months past, with better results than from any other method. The operation is so simple as scarcely to require description here. I prepare the cavity in the usual manner, being careful to wound the pulp as little as possible, cleanse and dry it thoroughly, then swab it with cotton saturated with one five hundredth per cent solution of bichloride of mercury, dry the cavity, place the aseptic graft directly on the pulp, and fill with "oxyphosphate.—*Southern Dental Journal.*

WHEN SHALL WE EXTRACT?

DR. T. S. DODGE, JR., NEW YORK.

[In N. Y. Odontological Society.]

Dr. Davenport demonstrates the beautiful precision with which the teeth of the two jaws meet when normal, and the necessity (as he thinks) of such an adjustment for perfect mastication; and having shown that the removal of even a single tooth disturbs the relations of all of its neighbors, he draws the conclusion that no tooth should be removed if dental art can save it. This doctrine is supported by many eminent names, and indeed has seemed of late to hold the field, principally because those who object to it are content quietly to go their way and say nothing. To me it seems an extreme of erroneous teaching to which we have come in the reaction from a former practice of indiscriminate extraction. Of the two extremes, I certainly prefer that which keeps too many teeth; but there need be no extreme, and there should be no sweeping general rule. Let each case be weighed by its own merits, and an independent judgment formed in each. The opinion which I advocate is that it is often a great advantage to a mouth to remove one or several teeth, sometimes entirely sound ones, and that when it is an advantage it is as much the dentist's duty and as sure a mark of high scientific attainment to extract as it is in other cases to preserve.

If we take first *a priori* view, it is remarkable that the teeth are so fitted for extraction. The design which governs the formation of the teeth (for recent experience has by no means taught me to abandon that view) seems to include their easy removal under certain circumstances. Natural processes conspicuously induce in the mouth a strict survival of the fittest. A mouthful of teeth left entirely to themselves will seldom remain perfect, and often fail entirely. Some teeth in almost every denture are of lower grade than their fellows, and are lost by gradual decay, breakage, absorption of roots, and final expulsion, while the other teeth remain for years whole and firm. This is as much a natural process as any other pathological sequence, and it is nature's way of eliminating weak teeth. Now, while all this is going on the constitution seems hardly to feel it. Even when the pulp inflames and aches, the pain produces an astonishingly small general disturbance as compared with equal pains elsewhere, and the gradual dissolution and expulsion of the organ seems positively of no concern to the general vitality, beyond the indirect effect on digestion produced by the loss of masticating power. Compare this with the history of other organs; for instance, those which are so nearly external that the surgeon does not hesitate to remove them for disease—the eye, the tongue, the testicle, the mammary gland: all these are frequently and

safely removed. They cannot be called necessary to life, and yet nature has no process for getting rid of them. If they are even slightly diseased the general health is profoundly affected, the constitution fights for their preservation, and when they are destroyed by the undisturbed process of disease, it costs the system an effort little short of death to throw off the useless wreck. For a worthless tooth the system has no care,—hews it away and casts it out; for a diseased eye the system fights to the bitter end.

Similar reflections may be made on the surgical removal of the teeth. All nations, however savage, seem to have known that teeth may be drawn or knocked out with impunity. When any small degree of skill is used, the operation is most kindly accepted by the part, and repair immediately follows. No other equal part of the body is so submissive. A molar may not differ much in mass from the last phalanx of the little finger; but you may wrench out the molar with only a moment's pain, while if you should twist off the phalanx and give it no care the consequences might be serious indeed. For all these reasons, I am persuaded that the original design of the teeth includes a facility of removal not found in any other organ.

Let us next consider the known results of the loss of teeth. When this is so that there remain no antagonists mechanically capable of mastication, the result is generally, but not always, an impairment of digestion, and frequently great discomfort about the mouth. But when it leaves teeth apposed which have surface and strength enough, though the fine articulation of cusps be destroyed and the denture what Dr. Davenport calls a wreck, yet it is surprising how little the wrecked patient may know of his sad condition. Of all the well-fed and eueptic gentlemen in this room, how many have thirty-two teeth? and of those who still have four or six well-articulated molars, how many are accustomed to think of their wretched state? Since I have read Dr. Davenport's paper I have looked with interest at the many patients in advanced life who have sat in my chair, well nourished and happy, with gaps scattered all around their mouths. The result of losing a few scattered teeth may be ruin and disaster, but it takes a dentist with a theory to find it out. The general experience of mankind gives the same conclusion as may be drawn from nature's tolerance of dental loss: that the original design included occasional dental mutilation.

Permit me now to specify the principal reasons for which I think it wise to remove teeth. *First*, to make room for the others. I have not brought any casts to demonstrate the success of regulating by removal. Probably Dr. Davenport would find the cusps so disarranged that he would not call it success. But I know, and so do most of the

gentlemen present, many mouths which have needed no other regulating process for prominent cuspids and crowded incisors than the removal of the first bicuspids. No operation in dentistry gives surer results. I remember, too, an extreme case where the cuspids came late and entirely out of the closed arch, and the mouth was restored to exceptional beauty by extracting the cuspids, the first bicuspids touching the laterals. There is hardly a tooth except the upper centrals which I have not extracted or seen extracted with marked success for the simplifying of the regulating process. *Secondly*, I extract teeth which are obvious failures from mouths in which the other teeth are of better quality. If I find in a new mouth fairly good second molars just come, with the first molars decayed all over, or half broken away, with exposed pulp or abscess, I make no delay in removing the first molars. They are failures, and nature is trying to get rid of them. When a tooth has long been defying my best skill; has been carefully treated to the apices of the roots, and will not be quiet; has been dosed outside and inside with the whole dental pharmacopeia and still rebels, unless it is absolutely indispensable, I condemn it as doing and sure to do more harm than good. This very day a new patient said to me: "There is a tooth which I wanted to have out, but the dentist wasn't willing." I found a molar very largely filled and well filled. He said the pulp had been removed and the roots filled, and by the character of other operations in his mouth I saw he had been in skilful hands. But he added: "It grumbles whenever I have a little cold, and is so tender if I chew on it that I have given up using that side of my mouth." This gentleman has never lost a tooth, and I shall not condemn this one without further acquaintance. But if this proves a permanent condition (as it may), the question may be fairly raised whether it is worth while to give up the entire use of half the mouth to retain the nice adjustment of the cusps. *Thirdly*, I extract teeth sometimes to save their neighbors. Suppose a molar and adjacent bicuspid which have been filled rather largely on the surfaces of contact, and are now again decayed at the cervical border of those fillings. The new cavities are far under the gum, with no satisfactory border toward the root. A deep pocket has formed between the two teeth, and both cavities are sensitive. Suppose the row of teeth unbroken, and the others pretty good. Those of us who are over forty will not have much hope of any fillings that may be made there, with whatever skill. But extract the bicuspid, and any tyro can save the molar. Precisely the same condition occurs between the second and third molars, especially of the upper jaw, and it is equally simplified by removing the wisdom-tooth.

We need not multiply examples.

I hope I shall not be thought of as one who lightly removes teeth, nor as sacrificing my patient's welfare to make easy my own work. Nobody, I will make bold to say, fights longer or harder than I do to retain poor teeth which are better in than out. And I am not willing to believe that any one has more success than I. But I insist that the one object to be held steadily in view is, not the marvel of the operation, nor any arbitrary rule as to the proper number of human teeth, but the comfort and welfare of each mouth judged by its own condition and managed according to its own requirements. This is scientific treatment, and it is guided by no hard and fast rules, but grows out of the best instruction, the most thoughtful experience, and the ripest judgment applied to each tooth in every mouth.—*Cosmos*.

TROUBLE FROM WISDOM TEETH.

DR. J. D. THOMAS, PHILADELPHIA.

I do not wish to be considered as asserting that these teeth in their malposition are always the cause of trouble to the patient. Many of them will become fully developed in the jaw and never perfectly erupted, yet will not have caused the slightest inconvenience; though in a paper read before the New York Odontological Society by Dr. La Roche, and published in the July number of the *Dental Advertiser*, a case is described of a gentleman whose mental condition bordered on insanity, diagnosed to be caused by the retarded eruption of his wisdom teeth, and the result of a cure following their extraction proved the diagnosis correct. From his description, Dr. La Roche seemed to form his opinion entirely from the one fact that the teeth were present in an erupted state. I have seen patients suffering in like manner, if not so severe, and the cause has been attributed by themselves and their family physicians to these partly-erupted teeth, but where, on examination, there could be nothing found to satisfy one positively that this was the seat of the trouble, and relief has not always been obtained by their extraction, from which I hold to the opinion that because a wisdom tooth may be, as we call it, inverted, it is not always the cause of the suffering from either aural or facial neuralgia which is attributed to it, any more than an erupted tooth anywhere else in the mouth. We all know it is not uncommon to see in our patient a mouth in which a bicuspid, a lateral, or even a cuspid is wanting, even in persons advanced in years, and on extracting an adjoining tooth the missing one is frequently found fully grown, but so crowded in the jaw that eruption has been impossible, yet in its healthy state it is doubtful if it would be the cause of neuralgia. In one case of this kind that came to my care for extraction the patient was a great sufferer

from neuralgia, which was attributed by her physician to her teeth, of which all in the upper jaw were variably decayed. In extracting, it was noticed that the cuspids were absent, but the patient could not recall ever having had them extracted. On examination after the operation, the crowns of these teeth were distinctly felt imbedded in the jaw in an almost lateral position. The patient was nearly sixty years of age. Owing to the depth of the position of the teeth extraction was not advised at that time, but relief was obtained for the space of two months, when the neuralgia recurred more severely than ever, and it was decided to extract these cuspids. There was nothing in the appearance of the gum to lead to the supposition that they were the cause, other than the knowledge of their presence in the jaw, but there was hope that their extraction might give her some relief. The cessation from pain lasted only for about three weeks after the operation, showing that the teeth were not the cause of the neuralgia.

To return to the consideration of the wisdom teeth. The prescribed treatment in most cases is extraction, and no doubt many people would be better off without them; but extraction, besides being difficult for the operator, becomes in so many instances of such serious consequences to the patient that there ought to be something else to give him relief. I do not mean that extraction, in all cases, is productive of so much annoyance. There is, as a rule, little to apprehend with the upper teeth, and many of the lower are accompanied with no more after pain than any other tooth; but I refer particularly to the irregular ones of the lower jaw.

In the first place, they grow out of the solid bone, right at the angle, where there is no alveolar process. The bone broadens here and is very dense, so we have solid bone on both the buccal and lingual sides, the ramus over the roots and the second molar in front. In the second place they invariably grow with curved and distorted roots, so that extraction will cause extra suffering. If it should be a badly decayed one, the chances are that there will not be strength enough in the tooth to bear the force necessary to loosen it, when it becomes necessary to cut it down as deeply as possible, extract the pulp and leave the remaining portion to work up to the surface for future operations; or go over and cut through the bone, with the alternative of extracting the second molar to give a better opportunity to extract the wisdom root. In either case the patient will have a very sore mouth, requiring treating for perhaps several days. If the trouble comes from pressure alone, extraction is likely to be attended with better success, but the immense strain on the parts already inflamed by the process of eruption will cause a still greater inflammation, with perhaps a severe abscess as a result. It is always necessary to have the patient

pay repeated visits, or to visit them at their homes, for after-treatment, and in a few cases where they have neglected to pay attention to instructions and have applied home remedies in the shape of poultices to the outside of the face, and have called in their family physician, I have been invited to pay for his services and even threatened with suit for damages for loss of time and suffering. Being a witness to so much that is unsatisfactory, I have been led to advise, in many cases, the removal of the second molar, in preference to disturbing the wisdom. If the latter is growing straight it will move forward and prove a useful organ, and should it be one with the crown pressing against the second molar, I prefer the anterior tooth, because, from the position of the wisdom, its removal will cause so much friction against the posterior root of the second molar as to be an injury there. I have seen several in which the pulp has died, accompanied by ultimate loss of that tooth as a result. To relieve the pressure is the object sought, and where the pain after extracting the wisdom tooth is likely to be severe, the removal of the second molar has been found to give the greater satisfaction

A former professor in one of our dental colleges has said that to be a proficient dentist one should be able to fill a tooth with a rusty nail, and on the same teaching a man ought to be able to extract teeth with a pair of gas-plumber's pliers; but I cannot see the policy of becoming so accustomed to their use that they will be claimed as the best instrument for that purpose. Some operators recommend the use of the physic forcep for the extraction of these teeth, but I fail to see wherein their advantage lays over the regular forcep. It is necessary that instruments should be so constructed in their beaks as to insure a firm hold on the tooth, without slipping; there should be as little curving in the handles as possible, so as to bring the force in extracting as near a direct line from the hand to the tooth, as possible, and the operator should assume a position with his patient that will insure the greatest amount of force with the least physical effort. To the wisdom tooth the exertion must be applied to the process of loosening in its socket before any attempt at pulling should be made, after which its removal depends on whichever way the position offers the best advantage. Where it is locked in by the second molar, after loosening, it can be turned and worked in its socket till the bone on either side is sufficiently distended to allow the tooth to be taken from under the second molar, but it is just this distention of the bone that causes after-trouble. Sometimes, instead of giving, a considerable portion of the bone will break away on the sides to which the force is applied. This will cause no permanent injury, provided the broken portion is removed and the wound left to heal without irritation; but it adds to the serious consequences of extraction as a remedy for these conditions.

THE CASE OF THE CROWN PRINCE OF GERMANY.

The daily newspapers have been filled with notes on the case of the Crown Prince of Germany for sometime. Expert microscopists at one time (Prof. R. Virchow among others) have declared that the growth in the larynx was a verruca (wart). From some private information we have been led to suppose that H. R. H. might be suffering from an alveolar abscess leading from the inferior left second molar tooth, as the following extract may disclose: "Dr. — has been called in private consultation with Dr. Morell Mackenzie in regard to the case of the Crown Prince of Germany, whom you know is said to be suffering from a laryngeal affection not yet perfectly defined. The submaxillary gland is involved on the affected side. When Dr. — examined the mouth he found on the left side a pulpless second lower molar, which had been filled some three years before, without any treatment of the root. He advised the removal of the filling, which was assented to, and on opening the pulp cavity a quantity of pus oozed out. The Dr. then urged the immediate removal of the tooth, which was not done as Dr. Mackenzie said the shock would be too great for the patient. The tooth was left open, and the Dr. came home. A month later, the Crown Prince having another spell, asked Dr. — to come again, and he found the cavity filled with food and the pus unable to ooze out; he opened the cavity and liberated it, when the Prince felt relieved at once. It was then agreed that the tooth should remain in the mouth till September, when, if there was no improvement, the dental aspect of the case should be turned over to Dr. —." In view of the foregoing is it unlikely that the tooth mentioned may not have causal relation to the trouble in H. R. H. throat? The *Medical Record* of December 3 gives Sir Morell Mackenzie's account of the case from the beginning up to about December 1. It is there stated that about "September 13, Dr. Evans, of Paris, extracted the left lower second molar for the Crown Prince, which was much decayed, the fangs showing the result of a considerable amount of periostitis." The *Chicago Times* for Thursday, December 1, announced that Hofzahnarzt Dr. R. Telschow, of Berlin, had been summoned to San Remo to attend the Crown Prince. From the latest reports the Crown Prince appears to be in a robust state of general health, only suffering from hoarseness. We trust that H. R. H. malady may be no worse than that of an alveolar abscess, which, as every dentist must know, would be easily cured by appropriate treatment; though in some cases the removal of the tooth alone would not prove to be a quick or permanent cure for abscess of this nature.—*Dental Review*.

WHY DO WE EXTRACT TEETH?

DR. E. A. BOYNE, NEW YORK.

(In New York Odontological Society.)

We must have a good reason for amputation or extraction. There are cases, yes; but those cases are few. Sometimes it is said we should extract to get room; sometimes because the teeth are crowded. I will not deny those conditions exist; but I recollect just now a young gentleman, whose name would be known to everyone in the room, who at twelve years of age had the sixth-year molars extracted. To-day no dentist who had not carefully studied the anatomy of the teeth could tell that any tooth had been extracted. The twelfth-year molars seem to be the size of the sixth-year molars; and the wisdom-teeth are fully developed. It is a beautiful arrangement, and the articulation is as handsome as almost any I have ever seen. But the young man is but twenty-three or twenty-four years of age, and between almost every two teeth in his mouth are proximal cavities. It is almost impossible to pass waxed silk between his teeth. The wear on his incisors, both above and below, is as great, it seems to me, as should be found in the teeth of a man of fifty. What causes that? The extraction of the first molar above has allowed the convexity of the arch to become almost a straight line. The extraction of the first molars below has permitted the concavity of the arch to become nearly a straight line. The molars behind have changed their position in such a way that the bite is shortened. The lower incisors are brought against the upper incisors as they never should be at that age, and the tendency is present in his mouth to have the upper central incisors spread apart. And that will increase as he grows in years. So, to come back to it, I do not know on what general rule teeth should ever be extracted. Now, why should they be preserved? First and foremost, I think Dr. Davenport has given us a good reason,—the articulation of the surfaces in such fashion that we may get not only a chopping motion of the jaw, but a lateral motion also. And I shall be delighted to show a cast which I have where the grinding operation is very evident, and where the cusps of the teeth had they irregularly antagonized would have utterly prevented that grinding motion. Secondly, it seems to me they should be preserved because proper contact of two teeth preserves them in health by preventing accumulations of food between them. Disturb the position of two teeth standing side by side, and allow them to lean against each other, and you have that condition of things which has been said never could exist—namely, decay of the cement. Time and again I have seen the cement decayed under the gums of teeth in that position, while I have never seen such a condition existing when the teeth stood in their normal

positions side by side and nearly erect. A third reason, and a lesser one, would be their appearance. A book has been published in the medical world, entitled "Filth Diseases." In that publication are enumerated cholera, typhoid, diphtheria, and almost all contagious diseases. Now comes the question, Is not decay of the teeth another? We are all well aware that the hair and the enamel of the teeth are the most persistent of human structures. I asked Dr. J. Foster Flagg the other day this question: "Suppose a tooth were presented to you which had erupted with a lot of defects in its enamel covering. Do you or do you not think that, if those defects could be immediately corrected,—that is, those little openings filled with some indestructible substance so that the covering of the tooth was once more rendered complete,—it would be in just as good condition to last for a lifetime as though those defects had never existed?" He answered without any hesitancy, "Yes, I think the tooth would last." And I must say it has seemed to me from the records I have kept that it would. I do not need to look more than ten feet away for confirmation in regard to one rather peculiar case where I hesitated for years whether I should extract,—a case where the teeth were decayed very extensively, and I had to use plastics to keep the sixth-year molars along. At last I attempted to fill them permanently. When finished, I sent the patient to Dr. Atkinson for his judgment as to what had been done. Two years and a half passed, and I never saw the boy. He then came to me in Paris. I had one sitting with him there, and he left my hands with his teeth in as good order, I think, as when Dr. Atkinson saw him. I did nothing more for him till this year, when he came to me with his wisdom-teeth erupted. I had three or four sittings with him, to make a few small repairs, and to fill these newly-erupted wisdom-teeth, all trifling operations.

This is a case where the defects were in every direction,—proximal decay, interstitial decay, right and left, and the teeth frail as we call them; yet the protection seems to have been complete. He does keep the gum hard and firm by thorough cleansing, thereby preventing mostly the deposition of tartar and preventing further decay. So the question arises, If the extraction of teeth is for the purpose of getting room, and thereby preserving those that are left, do we get room long enough to pay for the damage we do? The teeth that most need extraction for that reason are the ones that will least stand it, for they are the long, narrow teeth that are prone to decay; and as Dr. Davenport has accurately shown, we have but to wait a few years and contact is sure. Please understand, I do not mean contact between all the teeth in the lower jaw is sure, because it may happen that an upper tooth will come down in the articulation between two lower teeth, but

wherever they are not held apart by some mechanical means they will come together ; and their second contact is invariably worse than the first.

This is a subject of the utmost consequence to dentists ; and we should not allow this question to degenerate in the least degree into a question of economics. That is a question to be settled between ourselves and our patients ; but it is for us to settle between ourselves what is the best thing to be done ; money, time, and trouble out of the question. This is of great consequence to us.—*Cosmos*.

GROWTH OF DENTISTRY.

DR. G. A. M'MILLEN, ALTON, ILL., IN MO. DEN. ASSOCIATION.

To-day in the United States alone we have twenty-six dental colleges, twenty or more journals devoted to dental interests, and more than 100 dental societies. An important event in the history of American dentistry was the establishment of the Library of Dental Science. In 1839, Maryland founded by act of its legislature a college of dental surgery, beginning with four professors, who gave instructions in the mechanical work merely. Two years later a society like that of Baltimore was founded in Richmond, Va., and in 1844 a third in Cincinnati, called the Mississippi Valley Association of Dental Surgery. And about this time the Ohio college was instituted ; also one in Philadelphia. Then came, in 1855, the organization of the National Convention of Dentists. Thus it will be seen dental societies and dental colleges go hand in hand, and have done so from the beginning, and are destined, aye, compelled to do so throughout all time, for they are part and parcel of each other—or rather, one is the complement of the other. In comparing the Baltimore college of 1839 with those of to-day, it would be hard to find two objects with so wide a difference, yet pointing to the same end. Around this little one-room college, with its four professors teaching the mechanical branch of the art, at that time so insignificant, now so great a factor in the world's happiness and comfort, is a web of romance worthy of presentation.

From humble beginnings have sprung the giant profession of to-day, from germs of thought planted in good soil by these pioneers, still improved on, expanded, under the stimulus of progress, dentistry now takes her stand among the science of to-day. Her banners unfurled on the outer world speak forth words of cheer, since American dentistry leads the world. All hail old Baltimore college, the progenitor of them all. A college that now in her old age with characteristic modesty says in her catalogue for 1887 : “ We claim only to

aid with others what we did many years alone amid opposition."

What a change less than half a century has brought about, not alone in the practical working of our profession, but in the mode of education. Then four professors lectured on mechanical dentistry. To-day, in a catalogue before me, are the names of twenty-six men, in their different departments: pathology and therapeutics, dental surgery and special anatomy, dental mechanism, metallurgy, operative dentistry and *materia medica*, chemistry, professors of oral surgery, chemical instructions in all branches. The twenty-six dental colleges, during the past year, had 1,240 students. To me there is something startling in the figures. The question arises, What are we to do with them? Or, rather, where are all the men who are being turned out to find places? Did you ever realize what 1,200 new dentists a year means? In the great State of Illinois we have, all told, 942 dentists. Here, emerging in a single year from college walls, with diplomas, are enough men in a single year to supply our places in Illinois and 268 left, half enough to support Missouri.—*Western Dental Journal.*

HOW TO MAKE GOOD DENTISTS.

DR. M'MILLEN, IN MISSOURI ASSOCIATION.

Make it obligatory on the student to show a diploma of literary proficiency before entering a dental college. Require him to serve a regular apprenticeship under a competent master. The pharmaceutical law of my State requires a four years' apprenticeship as a drug clerk before one can receive a diploma; engraft a like provision on the practice of dentistry. Here comes a young man in your office. You do an hour's work for him; charge him three to five dollars for it. He thinks that fellow makes money faster than I can. Hadn't I best make a dentist? On inquiry he learns that for a small sum of money and a couple of years' time, a rattling good time at some city while at school, and he can emerge from a college a full fledged D. D. S. Does any one think we can by such means elevate the standing of our profession?

Gentlemen, what we need and what we must have, is thorough systematic training, a personal training, if you will, and nowhere else can this be secured so well as at the office of an honest dentist. Raise tuition; extend the time required; require students to produce evidences of scholarship; require him to serve a long apprenticeship, and when he goes forth, he will be an educated gentleman, and not as an uneducated, uncouth boor. Let colleges continue to this end. Let legislation be served in this direction. Let dentists themselves encourage greater proficiency. Let dental societies take a hand in this work, and the end will be gained.—*Western Dental Journal.*

DENTISTRY IN THE ARMY AND NAVY.

An English writer says that "in England the education of the dentist is three-fifths medical and two-fifths special, this special education being equal to the remainder of the medical education. It is thus recognized as a learned profession by the state, and we should endeavor to perform our duty in the service of the state. If medical appointments are made by the state when required, dental appointments should also be made. If dental services are required and not furnished, the interests of the state must suffer. Surgeon-dentists have been appointed to the royalty and to high offices, but should be also extended to the departments, for the benefit of unfortunates, as in the India and other colonial medical departments, the post-office, prisons, police, and most assuredly to the army and navy. Indeed, as long ago as 1857 the army medical department recognized the shortcomings as regards dental science.

The only thing done for the soldiers being the extraction of a tooth or the giving of a pill to allay pain, the surgeon usually leaves this ancient and limited treatment to the hospital sergeant, though where, when, or how this functionary acquires his skill must be left to the imagination, as no provision is made for it in his course of special instruction. Many are refused admittance into the army and navy of Great Britain on account of defective teeth. Dental surgery has no part in the special training at Netley required by the army medical department, nor is it included in the medical training of the candidate before entering service. The army surgeon's education is not considered complete when he leaves Netley, but a special examination is imposed on him between his fifth and tenth year of service. To this examination could be added a clause requiring a knowledge of dental surgery, and attendance on lectures and clinics. Some surgeons have done this, indeed, and obtained the diploma from special schools, and these serve to indicate the feeling of the want of such knowledge. Perhaps purely dental appointments could be made, and each officer and soldier could be required to produce a certificate that his teeth and mouth were sound before going into active service in the field. The present surgeon-general of the United States army informed me that no general provisions have been made by the government for dentists for the troops. A regular dentist is on duty at West Point, and also at the Naval Academy at Annapolis, part of the time, and several accomplished dentists are in the corps of the hospital stewards, but these are exceptions. The medical department has tried to arouse interest among its members in the care of the teeth by furnishing instruments when needed.—*Dr. Geo. Cunningham.*

ANCHOR PINS.

DR. L. WEST, MARIONVILLE, MO.

For some time I have been using the double headed pins used by the manufacturers of artificial teeth, as anchor pins in filling badly decayed and broken down teeth, and have come to regard them as valuable in saving such teeth.

If exposed, destroy the pulp and fill the root canal with a gutta-percha cone. I follow this with filling the pulp cavity with oxyphosphate, and before it hardens I put in one or more of the pins so that their round heads will project into the cavity far enough above the surface of the cement to act as anchors for either a gold or amalgam facing, and pack the cement closely around the pins. I wait awhile and then remove the excess and clear the margin of the cavity before it gets hard.

When it has hardened sufficiently I make a shallow cavity with the heads of the pins projecting into it. Around them I anchor the gold or amalgam.

For incisors I use one large pin, and for bicuspids or molars, two or more pins slanting them so as to give them greater strength.

I have built up incisors, cuspids, bicuspids, and molars in this way where it seemed impossible to get retaining points sufficient to hold a filling, and had made good useful teeth of them.

A SIMPLE AND EFFECTIVE SAFETY DEVICE FOR VULCANIZERS.

DR. WILLIAM H. TRUEMAN.

The frequent vulcanizer explosions reported the last few months prompts me to again call attention to a simple device suggested to me by the late Prof. Buckingham, and which I used practically, and fully tested, while preparing a paper on "Vulcanizers: the Dangers Attending Their Use," published in the *Cosmos*, Vol. XI., pages 561 and 622 (1869).

It is this: Drill a half-inch hole through the cover of the vulcanizer; then solder over it on the inside, using soft solder, a piece of copper rolled to about No. 30. This is now the weakest part of the vulcanizer, and, unlike the treacherous fusible plug, will become weaker, rather than stronger, with use. There is on the market a convenient modification of this, but it is no safer than the original suggestion. The double-boiler machines should have one in each. It cannot be too generally known that the thermometer is an extremely unreliable guide; this is treated at length in the paper referred to.

Within a few days a friend of the writer narrowly escaped decapitation from a vulcanizer explosion, his neck being badly cut. In addition to the wound, he is now suffering from serious injury to his eyes, caused by the hot copper dust blown into them at the time of the explosion.

HEREDITY.

DR. S. D. ROBERTSON, CHICAGO.

When the physical or mental taint exists on the side of the mother a greater number of children are borne of unsound body or mind, manifested in various forms, such as epilepsy, mania, eccentricity, melancholia, or delusions—an account of the last sometimes being exhibited in successive generations.

While it would be grossly false to say that all the bad qualities exhibited in human depravity were inherited from the mother, we have a right to assume that those grand and noble characteristics which we see and admire in true men and true women are *not* inherited from a bad mother.

One writer has said all nature is infinitely sacred, while mother is earth's holiest shrine. Who that lives but owes a debt of eternal gratitude to mother for what she has done for us, nurturing us through our germinal period, giving us an existence, caring for us in infancy, watching over us in childhood, and bestowing on us her vigilant counsels and admonitions, even up to manhood—determining the destinies not only of individuals, but of communities, nations, and kingdoms.

Hence every mother is entitled to whatever of filial affections and devotion it is in our power to bestow. They are heathenish who neglect her, even though she may abuse them. Let us all do our utmost for her, administer to her every comfort, for in doing this we shall only return a small remuneration in comparison for what she has done for us. Parents frequently live over again in their offspring, for children usually resemble their parents, not only in countenance and bodily conformity, but also in the general characteristics of their minds, in both virtues and vices.

The Edinburgh phrenologist and philosopher, Mr. Combe, remarks: Those who desire bodily and mental soundness in their offspring, ought carefully to avoid intermarrying with individuals who are either feeble in constitution, or strongly predisposed to any serious disease, and above all, the greatest care should be taken against the union of the same morbid predisposition in both father and mother.

The child receives its organization either good or bad, physical or mental from its parents. It is well known that a father whose system has become debilitated or impressed by any disease, communicates a similar affection to his offspring. So also does the mother transmit her infirmities in the same manner but in a more marked degree. The most prominent of the diseases which are transmissible are pulmonary consumption, scrofula, syphilis, dyspepsia, gout, and cancer. While

various reforms are being cried by the different political parties, I believe the greatest reform that this country needs to-day is reform in the marriage laws, prohibiting the marrying of individuals affected with such hereditary diseases as I have named. Even ancient Rome was far in advance of our own civilization in this respect. If you have never had your life insured and you should make application for a policy, stating in your application that you had lost two or more near relatives with consumption, heart disease, or cancer, see how quickly your application would be rejected. Besides the direct inheritance of an infirm constitution there are many other causes which may deteriorate the race.

The union of parents too nearly allied in blood is a prominent cause as observed among some of the royal families of Europe, as also in private life. Marriage before full maturity and development, particularly in delicate females, as well as great disproportion in age between the parents are potent causes of infirm health in their children. Conditions of the mind at the time of conception, during pregnancy, and lactation, I shall try to show, have their permanent affects on the offspring. Anxiety of mind, or unusual depression of the spirits in the father have been found imprinted in ineffaceable characters on the organization of the child, and not a few instances are known in which idiocy in the offspring has been the direct result of an accidental intoxication on the part of a generally temperate father, and if an accidental or an occasional drunk will precipitate such a legacy on the unborn, what must be the results on the progeny of chronic drunkards? A father sometimes grieves over, and finds fault with the follies of a wayward son without suspecting that he actually derived his origin from some forgotten irregularity of his own.

Fowler in his work on Sexual Science relates where a drunkard's wife declares that she can trace minutely in the great diversities of character and disposition in her numerous children just those very states of mind existing when she was bearing them. The first was peculiarly beautiful and amiable, but the husband began to drink, which overclouded her sky and awakened her displeasure, and the next child corresponds with this state of her mind. Then came poverty and that severe buffeting of the waves of adversity, which called out all her force, and the unamiable traits and character of the children born during this sad period corresponds with it, and so she reads in their characters the history of her own hidden life and feelings. The domestic history of all large families will be found inscribed on the different dispositions of each as compared with the others.

Biblical history corroborates this fact, Hagar's state of mind while pregnant illustrates the truth of this natural law, she was insolent and

mad because likely to bring Abraham the desired heir, so that Sarai became jealous of her and after repeated quarrels became desperate and drove Hagar into the wilderness to starve. The fruit of this conception resulted in the birth of Ishmael who was so unfortunate you remember as to hate and be hated by everybody, nor did this disposition end in the birth of Ishmael, but was transmitted to his progeny which characterized the Ishmaelites ever after.

The ancient Greeks seem to have been familiar with the laws of heredity; pregnant females were cared for and watched over with the most sacred caution, no one was allowed to disturb or vex them in any manner, and their chambers were provided with the most beautiful specimens of sculpture and paintings, such as the figures of Apollo, Narcissus, Castor and Pollux, that they might dwell on their fine proportions with that complacency of spirit which beautiful objects always inspire.

For the same reason the Spartans took their wives to the battlefield that their children unborn might be influenced by the songs and triumph of victory.

Maternal irritability is the great cause of all ill-natured children. That ugly boy always teasing his sisters, quarreling with his schoolmates, talking saucily to his mother and grandmother, tormenting the cat and dog, thrashing the cows around the barnyard with a cornstalk in one hand and the tail in the other and continually getting into trouble, cursing and fighting, is the more to be pitied the worse he is just as he would be had he inherited club feet, a hunch back, cancer or syphilis. Why? For the simple reason that his mother and father had stamped those irascible qualities into his disposition by their repeated quarrels during the child's nativity, and *they alone* should be held responsible.

An irritable mother completely broken down in spirit said of her daughter: "She is a perfect mule, even in trifles sits sometimes all day absolutely refusing to do anything, not even to comb her own hair; becomes furious and remains sulky and speechless all day without any provocation, teases the life out of her little brother and when told to stop declares she has not spoken to him since morning. Often when dressed for church, tears off her clothes, dishevels her hair, heeds neither persuasion nor reason, and in all respects is the worst girl I ever saw. I could not believe it possible for so bad a girl to exist. During her fetal life I had the worst of servants, impudent, lying, thievish, which provoked me almost to death, so that I was about crazy." Who was the responsible party in this case? Mother, daughter, or servants?

A single member of a family is sometimes observed to be thus affected, which cannot be otherwise accounted for.

The constitutional aversion to weapons of every kind shown by James I. of England is ascribed, and not without reason, to the constant anxiety and apprehension under which Mary lived during gestation.

So the philosopher Hobbes ascribed his excessive nervous sensibility and timidity to the fear in which his mother lived on account of the threatened Spanish invasion.

I have in my library a small work entitled "The Jukes," a study in crime, pauperism, disease, and heredity by R. L. Dugdale, member of the executive committee of prison association, New York.

It appears from the history of this family, that within a period of 75 years there have sprung from 5 sisters 1,200 persons. The history of 709 of the 1,200 shows the following facts:

Paupers.....	280
Years of pauperism.....	1,798
Criminals.....	140
Years of infamy.....	750
Thieves.....	60
Murderers.....	7
Prostitutes.....	165
Illegitimate children.....	91
Number of persons contaminated by syphilitic disease.....	480
Cost to the State in various ways.....	\$1,308,000

The last case in the illustration of this subject, from among many similar, is the following recorded by Baron Percy, and eminent French military surgeon, as having occurred after the seige of Landau, in 1793: The women of the town were kept for sometime in a constant state of alarm by a violent cannonading, when suddenly the arsenal blew up with a terrific explosion. Out of 92 children born within a few months afterward, Percy states that 16 died at birth, 33 languished for from 8 to 10 months and then died, 8 became idiotic, and died before the age of 5 years, and 2 were born with numerous fractures of the bones caused by the convulsive start of the mother, excited by the fright. So that 2 out of every 3 were actually killed through the medium of the mother's alarm. These instances, with much other evidence, are sufficient to establish the existence of a direct relation between the general condition of the mother, and the general constitution of the child.

By many women gestation is regarded with alarm—as a period of danger, and worse than doubtful in its results. This is not true, it is a consolation to know that this period is not naturally fraught with danger, but is rendered perilous only, or chiefly so, by neglect or mismanagement from the moment of conception. If there is one duty more paramount than another, it is the obligation on the part of the father and mother to secure for her by every possible means the highest state of mental and bodily health, of which her constitution is susceptible.—*Dental Register.*

CAPPING PULPS.

EDITORIAL IN DENTAL REVIEW.

"I believe of any tooth which has ached from pulp exposure, that the pulp will die inside of four years, no matter how treated, capt or doctored." This maxim, the creed of Dr. J. B. Hodgkin, of Washington, D. C., is certainly not based on a healthy foundation. It is true, the capping of exposed pulps is followed by results less certain than perhaps any other operation in dental practice. It is also true that pulp capping is often performed under circumstances which do not promise favorable results, and in a manner which can not result otherwise than in failure; and frequently with much less skill than a delicate operation of this nature invariably demands. Hence, pulp-capping has to some extent fallen into disrepute, at a time when its future promises more roseate results than ever in the past. Under these circumstances, the first sentence of this article finds some justification in being expressed. However, it is not true that all pulps which have ached from exposure die inside of four years, no matter how treated, capt or doctored. There are many cases in young persons, which are known not to have had such a termination. It seems that exposed pulps which have ached, and which have received careful treatment, rapidly pass from a pathological to a physiological condition, provided the vitality of the pulp has not been impaired, the exposure is not of too long standing, the subject is in good health, and the exposure of sufficient size that free access may be had to all portions which have been exposed to the atmosphere. In children, these cases are cured, and secondary dentine forms, in some cases, with astonishing rapidity. Much care should be given to thorough antiseptic applications—antiseptis once secured, capping should not be delayed. We believe exposed pulps are frequently treated too often, and too much medication enfeebles their vitality. Our method is to expose an already exposed pulp sufficiently to be able to see the pulp itself; then to thoroughly wash it with a warm solution of bichloride of mercury, one in two hundred and fifty of water, and if the appearance of the pulp is normal, immediately flow over it the usual gutta-percha solution, followed by thin oxyphosphate. The proper introduction of the latter is all-important; no pressure must be exerted, and the entire operation should be painless. Metallic fillings should not be introduced in less than six months, and exposure to rapid and repeated change of temperature should be avoided. Under these conditions, all ye who voice Dr. H.'s creed, will find that many pulps in persons under twenty years of age can be saved for ten or more years—perhaps a life-time. Is not this worth a trial? A careful, patient, continuous trial till success crowns your labors?

TREATMENT OF ALVEOLAR ABSCESS.

DR. W. E. DRISCOLL, MANANEE, FLA.

In the ITEMS OF INTEREST, for November, 1887, there is an excerpt of Prof. L. C. Ingersoll's "Dental Science," entitled, "Treatment of Alveolar Abscess."

He advises forcing carbolic acid through the tooth canal and out through the sinus on the gum, to be repeated every three days as long as pus is seen. Then, after the supposed cure, wait ten days or two weeks before filling. I wish to ask why all this treatment and waiting? What is there in it or about it to recommend it above immediate root filling? There must be some reason according to his judgment, and I want to know what it is. Such long treatment and waiting is sometimes equivalent to doing nothing or worse, since a large proportion of our patients can not be held for such a length of time, even if there was the least occasion for, or advantage in, such a course. It is very singular that in so simple a process, and one of so common to every practitioner, that there should be such diversity of opinion and practice.

Also in capping pulps, men who seem to be in the front ranks of the profession, report entirely diverse experience. Some succeed in saving nearly all the diseased or exposed pulps they treat, while others, seemingly as able and expert in other manipulations, have so little success as to condemn the practice entirely. Will locality or prevailing habits of communities account in part for the difference in these experiences? Or, are men so constituted that they *must* differ even in treating alveolar abscess and in capping exposed pulps? As long as these processes were in the experimental stage, different degrees of success were to be expected; but immediate root filling and capping pulps have been so long proven successful, that failure seems at this day hard to account for.

Treating Pulpless Teeth.—Dr. J. S. Marshall, Chicago, says: When the apical foramen has been properly closed there is usually no more trouble with alveolar abscesses, for septic materials are prevented from coming in contact with the surrounding tissues. Is such practice "the reverse of well established surgical principals?" I think not. It is nature's own method of trying to prevent a recurrence of the disease, for it not infrequently happens that the apical foramen in pulpless teeth after a time becomes completely closed by a deposition of secondary cement, doubtless the result of this previous irritation of the pericemental membrane. Can we go far astray when we follow such teaching? Are we not constantly trying to understand the processes by which nature restores a diseased organ to health, and the laws which govern them, that we may profit by the knowledge, and so shape

our treatment as not to antagonize them, but rather prove helpful? This is what the dentist is trying to do by the method pursued in treating pulpless teeth. This is not empiricism, but enlightened, rational practice.

Furthermore, when the central canal has been thoroughly cleansed by removing the remains of the devitalized pulp, the apical foramen sealed, the cavity properly dried, the dentinal canals rendered antisepic by appropriate treatment, the central canal and cavity of decay is plugged as to exclude air and moisture, it is hardly possible for "products of decomposition to be formed in the canal or canaliculi, pass into the tissues beyond and be absorbed."

The antiseptics generally used are wood creasote, carbolic acid, and bichloride of mercury, either of which will prevent decomposition; but when as in this method of treatment, the effect of excluding the air and moisture are added to the power of the antiseptic remedy, it seems almost impossible for decomposition to take place. It is admitted that in those cases which have not received appropriate treatment such conditions do exist; but even in these extraction is not called for, as it is yet possible to place a good proportion of these in a healthy condition.—*Dental Register.*

Pyorrhea Alveolaris.—The most notable improvement in methods of treatment is that introduced by Dr. Adair. This consists in applying to the roots of the teeth, after the concretions have been removed, a saturated solution of iodine in wood creasote, and then filling the pockets with tannic acid dissolved in glycerin, to form a protective dressing, and repeating this treatment once each day till the pockets are closed by new tissue. A method very similar to this was introduced by Dr. W. H. Atkinson some twenty years ago, and which at first met with general adoption, but soon fell into disuse, but is now revived.

Since the introduction of Dr. Adair's remedies, many have called to mind those of Dr. Atkinson, which consisted of four formulas, viz.:

1. Chloride of zinc and re-sublimed iodine, equal parts rubbed together.

2. Saturated solution of iodine in alcohol.

3. Saturated solution of iodine in wood creasote.

4. Pure wood creasote. Later he substituted caustic potash and crystallized carbolic acid, rubbed to a paste in a warm mortar, and which are now being used with much better success than formerly, doubtless owing to the fact that the disease itself is better understood, and consequently the remedies needed for its successful treatment.

Chicago.

JOHN S. MARSHALL.

HELPFUL HINTS.

Coating the tin foil with collodion, after it is placed on the model, will cause it to readily separate from the rubber plate after vulcanisation.

Covering the ridge of a model with very thin tissue Manilla paper will prevent the sticking of the base plate to a dry model when grinding up and arranging the teeth. It can then be removed.

In grinding up all partial sets, especially those consisting of lower molars and bicuspids, they should be made shorter than the bite indicated by about once or twice the thickness of a common visiting card, else, when completed, they will be found to strike about this much too soon.

H. A. ROBINSON.

Foxcroft, Me.

Treating Exposed Pulps.—Flow a thin mix of oxysulphate over the exposed pulp; after this has set slightly, add a layer of oxyphosphate or gutta-percha. Then fill with amalgam or gold. Where patients have suffered for hours or days from an exposed, pulsating pulp, I make soothing and quieting applications, and devitalize as soon as possible. Sometimes it is necessary to broach the pulp to relieve congestion before arsenic will be taken in. A few hours application is often sufficient, while with other exposed pulps it demands repeated application for days and weeks. After the arsenic has done its work, and the pulp does not give response to the probe, the cavity should be closed loosely for a few days with a pellet of cotton, dipt in oil of cloves and morphia. At the next sitting, the cavity should be opened wide to gain free access to the canals. Clean out well with oil of cloves, glycerin or alcohol, and with probes remove all the pulp. The canals should then be syringed with tepid water and phenol sodique to remove any shreds. After the canals have been prepared as thoroughly as possible, they should be filled temporarily, as there is usually some irritation and tenderness about the apex that requires time, and sometimes antiphlogistic treatment.

Portland, Me.

C. C. PATTEN.

Filling Teeth and Filling-Materials.—It is a wholesome indication of the progress of the times that papers and discussions in our societies are taking the turn of dealing with the practical and simple things of every-day use. The scientific wave which has swept over the profession of late years is about to be succeeded by a practical wave,—an application, as it were, of the science in practice. These waves of theory and practice alternate, and rise and fall with a cadence and a mutual compensation, caused by reaction on each other.

—A. H. Thompson, Topeka.

PREPARING A TOOTH-CAVITY FOR FILLING.

DR. A. H. THOMPSON, TOPEKA.

In the anterior teeth proximal cavities will require a slight groove at the cervical border, which should be deepened at the ends into a sort of pit. This pit should not be a tap drilled into the tooth-substance for a quarter of an inch to chip the enamel and weaken the walls, but a depression a little deeper than the groove, just sufficient to secure the first portions of gold and prevent rocking. As the caries will have made a groove along the labial wall, none will usually need to be cut there; but one must be made along the palatal wall toward the center of the tooth, and a pit-like depression toward the corner of the tooth-edge, thus completing the apposing retaining-points. Great care will be required in cutting toward the corner that the enamel be not checked or weakened. If it is weak, or becomes cracked, it had better come off at once, for it will surely do so, and lead to its ruin, after the filling has been in use. The corners break away sometimes when we consider them strong, and we must take no risks that we are aware of. A weak labial wall supported by cement is safer than a weak corner. Proximal cavities in the posterior teeth will need to be grooved from the grinding face opening, with as little undercut toward the sides as possible, though caries will often make this undercut. In other positions the shape made by the disease will usually leave the cavity well formed to retain the filling; but where the edges are shallow, pits or grooves must be made that will be in opposition. Regard must always be had to this in retaining-points, that the filling may be secure against the lifting of expansion or the capillary effects of the fluids within and without the tooth. The forces which act on a filling to cause its expulsion are so strong that all the security possible must be given to the filling. The edges of the cavity should be beveled and polished as well.—*Cosmos*.

Defective Dental Education.—Dr. Louis Ottoffy, Chicago, says: One of the shortcomings of our schools is “the lack of educating the dentist to the proper appreciation of prophylaxis. The student, as he now leaves the portals of the college, is too much the dentist, mechanic, and operator, and falls short in being the doctor and teacher. His time has been occupied with practical subjects; his energies have been bent in two directions, namely and substantially, to fill teeth and make dentures. He has learned how to treat and how to save diseased teeth, and partially and fully replace losses of structure, but he has not learned that the work of the majority of dentists of to-day fails because of the ignorance of the masses in general. Many dentists, in consequence of not having had the idea firmly impressed

on them that without the proper education of the people all labor is worthless, plod on for years, perhaps, without in a single instance standing before their patients as doctors—teachers. They have stood there perhaps faithfully as operators, as mechanics, and, perchance, even as scientific men; but, notwithstanding all, they have failed to make good their title as teachers. Hence, dentistry is not making as rapid progress in the direction of education and prevention as it should. Almost perfection is attained in methods of repairing destruction and replacing loss of dental tissues, but there is not yet the full appreciation and understanding of preventing the necessity of such repairing and replacing.

An earnest, serious impression should be made on the student, before he leaves the college halls, of the grave importance of these questions. He should understand that he fails to perform his mission, unless he proves himself and educator of the people, as well as a good conscientious, honest operator.

Relative to the present status of dentistry, a recent writer in one of our dental journals thus expressed himself: The facts are about as follows: There are now three or four per cent of the dentists of the entire world who have regular medical qualifications, and they are engaged in the practice of dentistry as specialists in medicines. About two per cent are Ph.G.'s, B. S.'s, or F.C.S.'s, and they do not practice as specialists in medicine. As near as can be estimated twenty to twenty-two per cent hold the degrees of L.D.S., D.D.S., M.D.S., D.M.D., D.E.D.P., or hold certificates from state boards of examiners, or licensing bodies in foreign countries who do not confer degrees. Just how many of these believe they are practicing as specialists in medicine it is difficult to estimate,—probably not more than one-fourth at the outside. From this estimate, based on the statistics of all countries, we are led to conclude that about seventy per cent of the dentists of the entire world are without medical or dental qualifications attested by colleges or licensing bodies.—*Dr. S. W. Harlan.*

The Need of More Clinical Work and Better Preliminary Education.—The student who comes to college without being in an office, does not generally get half enough work in college clinics. This should be improved. In preliminary education lies our greatest help in bettering our profession. If we will raise the standard necessary to enter college, then we can truly count on better dentists and a higher professional standard. The colleges are alive to this. They are doing the best possible, and they ask your earnest co-operation.—*Dr. Patterson.*

NATIONAL DENTAL MUSEUM.

DR. WELCH:—I like the article on “A National Dental Museum,” page 473. I hope that matter will be pushed for all it is worth; it is a grand idea, and I hope it may be accomplished. Why not call for responses from the dental profession throughout the United States. I believe a large majority would vote for it, and, if necessary, work for it and contribute to it.

E. L. SWARTMONT.

Utica, N. Y.

Flies in the Operating Room.—Every one must have experienced the intolerable nuisance flies are during the summer in the waiting and operating rooms. In Switzerland oil of bays (*huil de laurier*) is used to prevent the visits of these “household friends.” A coat of this oil is applied to the walls, which effectually excludes flies of all kinds. This remedy has also been tried and found effectual in the south of France in preserving gilt frames, chandeliers, etc., from becoming soiled. It is even remarked that the flies soon avoid the rooms where the application is employed.—*Brit. Journal of Dental Science.*

Extracting Sixth Year Molars.—If I presented models, the weight of the evidence would be against the extraction of the sixth-year molars as a common practice. I am sure I could produce convincing evidence that much injury has been done in some cases by the extraction of the sixth-year molars. I have seen a few extreme cases, however, where it had not done much injury, and had perhaps resulted in some good.—*Dr. J. N. Crouse.*

Why extend a college term to nine months, when not one teacher in a thousand has enough material to occupy a five months' term? It is all stuff and nonsense, and simply means “effect.” Fully one-third of dental college lectures consist of a poor rehash of a secular school course that should be on the tip of the tongue of every student sufficiently advanced to commence the study of dentistry.—*Ed. in Western Den. Journal.*

Packing the Vulcanizer.—Steam can be prevented from escaping a vulcanizer by mixing unslacked lime with water, to the consistency of paste, and placing a small quantity around on the rim of the vulcanizer, just when you have it ready to close.

Sherman, Texas.

W. W. GRANT.

Robinson's Remedy.—An intelligent gentleman said to us the other day: “Doctor, do you know what is called Robinson's remedy is splendid for sensitive teeth?”

Yes, we said; it is generally considered good.

“Why, I never saw any thing like it on my teeth.”

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AFTER-PAIN IN EXTRACTION.

Dear Doctor :—Permit me to suggest, to those who have trouble in after-pains from the extraction of wisdom teeth, the use of a solution of the sulphate of morphine.

Chicago.

W. F. LEWIS.

Melting Gold at a Low Temperature.—Gold will only melt at a comparatively high temperature, as we all know, but what is not generally known, the *Jeweler's Journal* says, is that if two per cent. of silica be added to the gold, it can be melted over the flame of a common candle.

Gold Crowns.—Dr. J. Gardiner Morey, of New York, makes a crown as follows: An impression of the root to be crowned is taken in hard white wax, thus forcing back the loose gum; from this a plaster cast and an impression in a material of his own device is made; over the last is placed a ring of rubber, and in it a small funnel to give proper shape to the lower part of the die, cast of fusible metal poured into the ring. The cap is made by striking the die on gold held on a soft piece of lead, after the manner of Drs. Brown, Evans, and others.

A Tooth immersed in a solution of the tincture of iron in eight parts of water has its enamel entirely destroyed in one hour.—*Exchange*.

Toothache drops fatally poisoned a little child in Waterville, Me., a few days ago.

Members of the Chicago Dental Society subscribed about \$150 at the November meeting to resist the efforts of the owners of the bridge and crown patents. We understand that the crown cases have been appealed by the owners of the patents.—*Dental Review*.

Advice to Correspondents.—Mr. Ruskin says: “Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else.”

Bursting of a Vulcanizer.—Dr. O. P. Forbush, a Montpelier, Vt., dentist, had a narrow escape from death by the bursting, on Monday, of his vulcanizer, at a pressure of 316 pounds to the square inch. The brass cap struck the ceiling, and, glancing, passed within two inches of his head, and through a window behind him. The apparatus itself was twisted out of shape and the oil stove beneath was blown to fragments.

For Our Patients.

O, IF I HAD SEEN IT SOONER!

Ah, yes; when golden hours have past,
We see the folly of our course;
We act the fool, and then, at last,
Can trace our sorrows to their source.

The half our life is spent in that
We know will bring us grief and pain;
The other half, in sore regret
We have not done the right, so plain.

Why is it we can never learn
From other fools the truth,
That fingers put in fire must burn?
But sin, then feel, then whine, forsooth!

Why feel the whole of life has lacked
All qualities but vanity?
Come, let us rouse ourselves, and act
Like men, the part of sanity!

We *may* be something *if we will*;
The qualities that make success
Are in us smothered, struggling still
For vent to burn, to shine, to bless.

T. B. W.

PERSEVERANCE AN IMPORTANT FACTOR.

In any line of business, the man who uses reasonable economy, and has the ability to give fair management and the perseverance to hold on, will, in a great majority of cases, make a success; while, on the other hand, the one who rushes into whatever he has undertaken with a spasmodic endeavor to win all at once, as a general rule wastes his energies, and often fails for sheer want of perseverance. The editor of the *Industrial Gazette* has observed that the man who starts in to do a day's work, and attempts to do as much in one hour as ought to be done in two, will usually find it necessary in a short time to take a rest, and while he is resting will lose valuable time, which he evidently feels he ought to make up, judging from the spasmodic efforts he will make when he starts into work again. But at night the man who works steady, but perseveringly, will be found to have accomplished the most, while usually he will also be found in a much better condition to commence again the next day.

So it is in business. One will seem to hustle around and make a considerable to-do over what he is doing, and after wasting his energies in accomplishing what, by taking a little more time, could be done

with very little effort, and then, because, as he thinks, he fails to meet the success he imagines he should, becomes discouraged, and is ready to make a change to something else. This, in a majority of cases, proves a loss, and, in consequence, he does not succeed as the energy he displays would seem to warrant. Another man, while he may not make a great display of his energies at the start, will go to work more systematically, and will have better opportunities to economize, and in many cases to manage better than when he attempts to rush things. If he will but observe, he will be ready to take advantage of any favorable circumstances that may arise. The man who is constantly shifting about is always making a change at the wrong time, when a little perseverance would have brought him through all right. In all lines of business there are fluctuations, ups and downs, and to succeed we must persevere. It is when the odds seem against us that it seems the most important to persevere.—*Scientific American.*

The Cultivation of the Faculty of Knowing is of incomparably greater moment than the mere aquisition of knowledge. He is not the best of explorers or compaigners who is the most burdened with baggage, but he who knows how to forage well, and how to make the best possible use of what he has or can obtain. So it is with the student; to know how to learn, so that when need arises knowledge may be quickly obtained, is a better provision for the business of life than is afforded by the largest or richest store of information packed away in the memory—perhaps so packed as to be inaccessible when wanted. If students for themselves, and teachers for their pupils, would insist on the importance of “learning how to learn,” instead of cramming, there would be fewer disappointments in life, and greater and more enduring successes. The vanity of carrying a huge quantity of information for the sake of display is contemptible. The folly of attaching any real value to vast stores of knowledge is pitiful. The only brain properly worth carrying about is the power of finding at pleasure and learning at will precisely what is wanted; and this power cannot be acquired without considerable practice in the art of learning—an art which the student should make it a first object of his best endeavor to master.—*Lancet.*

Is it not strange that civilized women will make wasps of themselves—not in stinging, but in form? How foolish for them to try to improve the form God gave them; and how ridiculous their attempts—yes, and how injurious. It is singular that while girls and women are better than boys and men in almost every thing, that in dress they exhibit the utmost of foolishness.

SELF-CONTROL.

An expert and experienced official in an insane asylum said to us, a little time since, that these institutions are filled with people who have given up to their feelings, and that no one is quite safe from an insane asylum who allows himself to give up to his feelings. The importance of this fact is altogether too little appreciated, especially by teachers. We are always talking about the negative virtues of discipline, but we rarely speak of the positive virtues. We discipline the schools to keep the children from mischief, to maintain good order, to have things quiet, to enable the children to study. We say, and say rightly, that there cannot be a good school without good discipline. We do not, however, emphasize, as we should, the fact that the discipline of the school, when rightly done, is as vital to the future good of the child as the lessons he learns.

Discipline of the right kind is as good mental training as arithmetic. It is not of the right kind, unless it requires intellectual effort and mental conquests. The experienced expert, referred to above, was led to make the remark to us by seeing a girl give way to the "sulks." "That makes insane women," she remarked, and told the story of a woman in an asylum who used to sulk till she became desperate, and the expert said, "You must stop it. You must control yourself." To this the insane woman replied, "The time to say that was when I was a girl. I never controlled myself when I was well, and now I cannot." The teacher has a wider responsibility, a weightier disciplinary duty, than she suspects. The pupils are not only to be controlled, but they must be taught to control themselves, absolutely, honestly, completely.

—*Journal of Education.*

Gold is and Will Remain the King of Filling-Materials, and the practitioner of the most mediocre ability is using it more and more. As he learns to preserve more of the teeth with the plastics which he formerly extracted, so now he is also ambitious to extend his knowledge of gold filling and increase his practice of it. When the most ordinary dentist is ambitious to do fine work, and that ambition is fix habit, he is a saved man. By persistent study and the practice of better methods, he will soon be lifted above mediocrity, and his further progress is then assured. Just as sure as he is desirous of progressing, will he develop and improve. No man is so poor a workman, or so unpracticed a student, or so illiterate, but that, with a sincere desire to improve, he may attain a degree of ability that will be a pride to himself and friends; and in the use of gold for filling, no man is so unfortunate in early training but that, by proper study and application, he may attain a respectable ability.—*A. H. Thompson, Topeka.*

Editorial.

THE EVERLASTING HILLS SHALL BE SCATTERED.

Whoever has closely observed the varied and continual changes taking place to reduce the earth's surface to a level will have seen many wonderful and instructive phenomena. And these changes have been going on for thousands of years.

The turbidness of the little rivulet during a storm, as it starts down the mountain side, is a trifling circumstance; but when we consider the thousand other rivulets that start from these giddy heights with the same turbidness, the significance is more marked, especially when we trace these little currents, while the storm still rages, till they begin to unite to form larger streams, with greater turbidity. Grains of sand and disintegrated rock, and soon little pebbles and larger stones, are moved; now sand in greater volume, and larger stones and broken rock, are seen rolling along with the water; and, still more, as stream meets stream, and these unite in larger courses; till finally we have floods on all sides of the mountain. Now tender plants are loosened, and large stones are moved by these accumulating waters; and soon, by the broken branches and large shrubs and heavy turf on their surface, we see evidence of increased violence and collision.

Now, see the power of moving waters! The swelling, angry, rushing volumes of black water sway to this side and then to that, cutting down their embankments, uprooting brush, undermining huge rocks and bringing great trees splashing into its boiling current, their mighty trunks bending, breaking, cracking, and the very tumbling rocks bursting as they are thrown along, all forced hurly-burly down, down, down the great steeps, grinding, trembling, crashing, thundering, till the mighty avalanches sweep everything before them. No wonder great gullies are cut out of the flinty rock and the foot of the mountain is strewed with great seas of mud and debris.

Thus the everlasting hills shall be scattered; for if one storm can do all this, what can centuries of storms do?

How came this earth, this soil, this vegetation on the mountain top? The mighty, lonely peaks appear like bear rocks!—devastation, vast and uninterrupted, is the only sight. Climb into the sky and write your name on yonder great cliff. If you are young, come again in fifty years and see your marks slightly dimmed. But look at the base of that cliff, and see the fine powder and coarse sand. Ah, the rays of the sun that have shone on that rock, day after day and year after year, though they have seemed so mild, have eaten into the surface, and the alternate rains, as they have beaten against it, have

loosened particles and thrown them down. You can see it in the little dimming fifty years have made in your autograph.

This powder and sand have been continually accumulating; and as, during years and years, they have lain there, they have been as continually changing. Scrape away the freshly fallen and see how pasty that underneath has become: the coarse grains, ever and anon, have been bursting and splitting and dividing and subdividing, till none resemble the rock from which they came. Yes, the penetrating sun and the splashing rain, and the rough winds, the biting frost, the disintegrating heat and the varied seasons, have done more than to crumble the rock; they have actually changed its nature; the very air that creeps among its particles and the tiny insects and the growth of mold have helped to do it. That wonderful refiner and life-principle,—oxygen,—which has come in winds and rain and sun has seized on each particle and set it on fire!—on fire to refine its nature and consume its dross, and thus to purify and exalt and prepare it for life. We call the result an oxide,—a salt; but what is an oxide but oxygen burning up a base? or rather the changing of an elementary base into a sublimated compound that life can seize on? The rust of iron only represents iron on fire!—a fire only slower than the braze consuming the burning building. Thus has pulverized rock become earth, which is oxygenized rock.

Do you see yonder large bird, perched in that mountain crag? How alone and lonely he seems! No; yonder is his mate; yes, and now we see others, as they come in from vast distances. If we had been here at a favorable time we should have seen thousands. But, look! what has this strong bird in its mouth?—a fish! From what a wonderful distance he must have flown with it. And all these thousands of birds have homes in this mighty hight. They fly everywhere for their prey; and from sea and land bring it here to their common eating ground. See how thickly the bleached bones of their food are scattered about. Some have crumbled into dust and are buried with the excrements of these birds. See, too, the mold of the countless millions of the bodies of dead birds, till—well, this is the fertilizer which gradually changes the earth,—which we have seen is pulverized and refined granite,—into soil for vegetable life. But whence came the seed for this vegetation? Ah, the birds' crops are sure carriers; and, deposited in the soil, the flora and the grasses and the great trees spring up. In turn, all these decaying, produce deeper and richer soil; then this soil produces sod, and this sod mold, and—well, it was the mixing of this mold with the water made by the storm that caused the turbidness we saw. And all these ingredients represent the oxides and carbons, the acids and alkalies, and all those combinations and

results of chemical, vegetable and animal life, which makes the fertile mountain side. These, as the great God strews them at the foot of the mountain, makes the fertile plain.

Have you noticed there are but few real plains at the foot of mountains and high hills? They only seem to be plains. What at first appears as levels, by close inspection will be found declivities,—declines of miles in length and breadth. This shows they have flowed from the mountain. If we dig down into them we shall find them composed, to a great depth, of mold and rock and decomposed vegetation of the neighboring mountain. The mountains have become less that the valleys may become plains, and the plains more vast.

Thus, too, are the beds of great bodies of water filled. Who has not traced ridges of water-worn pebbles and sea-shells, where there is no water to produce them, indicating the shores of ancient lakes and inland seas now no more? The deep depressions were filled by debris from elevated places. And even in our own time we find large bodies of water becoming more and more shallow by the filling in of yearly deposits. As man requires arable land it is prepared for him. The mighty valley of the Mississippi, many hundreds of miles wide, was once the bed of a vast sea.

Thus the everlasting hills are scattered, and were it not for the awful earthquakes and the industry of tiny insects of the corals that raise new elevations and even produce new mountains, the earth would be a level,—a level covered by the mighty sea.

A LEARNED STYLE.

Some writers who are quite correct in the general composition of their sentences are so persistent in interlarding highflown phrazes and a learned nomenclature that they are not understood by a majority of their readers. The ordinary student needs a dictionary, and a lexicon of unusual terms, by him to get any meaning of these writings. The stilted description of a simple incident as given below is in point:

“I was glad to see the flagitious harlequin of a joking harpy flagellated just after partaking of his favorite congo, and was about taking his departure for a golf. Though it was only for the theft of a haricot from a domesticated harrier, his conduct was contemptible. He deserved the discription of his dude apparel.”

No doubt this man tells the truth; that is, we presume so from his learned display of misterious words. But what is it all about? Let us translate it. It is something like this:

I was glad to see the disgraceful buffoon of a joking plunderer whipt just after taking his favorite tea, and was about taking his departure for a ball-play. Though it was only for the theft of a kidney

bean from a tame buzzard, his conduct was contemptible. He deserved the taring of his gaudy clothes.

But is this much worse than the "professional" man who asks us advise thus?

"I have a case of infantia clonism, accompanied by hydropedesis and tic, with a singular movement of the levator labii superioris proprius—all growing out of alveolar abscess of the anterior organs of mastication. Clonospasmus was severe, but speedily gave way to diachoresis from the sockets following extraction. What caused this clonodes? How came it so quickly medicabilis? Is it generally followed by gastroenteralgia? Though this I admit was slight, and may have been only singultis. For this I ordered sodii chloridum in aqua menthae piperitæ dulcis."

How much more learned this sounds, and how much more mysterious and complicated the disorder, and therefore how much more the cure that "I" have wrought, than if reported as follows:

I have a case of spasms of an infant, accompanied by sweating and twitching of the skin with a somewhat singular movement of the upper lip—all growing out of abscessed front teeth. The spasms were severe, but speedily gave way to the exudation of the pus from the sockets following extraction. What caused these spasms? What was the philosophy of their speedy cure? Is it generally followed by pain in the stomach and bowels?—though I admit this was slight, and may have been only hiccup. For this we ordered soda in sweetened peppermint water.

We do not say there is never need of a learned style. But we do say, generally, even when the motive is accuracy, many men who walk on stilts would look better walking unostentatiously on the ground. Usually English terms are quite as definite, and much better understood. There would be less foreign terms, even in professional writings, and less foreign airs in our writers, if there was less pride to appear learned.

Sometime since one of our printers accosted us with, "Doctor, would you not like to have the professional terms you use in the ITEMS, that are derived from the Greek, printed in Greek characters?" "Why," we replied, "they look bad enough printed in English letters; even then there are hundreds of readers who do not understand them?" "O, of course," said he, "but it would give the pages of the ITEMS a more learned appearance." We begged to be excused.

It is folly, and generally ridiculous, for writers to use foreign terms when English can be made to express their meaning. Even when it is necessary, it is better to define the terms as they are used; for though it is supposed professional magazines are for professional

men, and that such readers are familiar with professional terms, yet, in fact, it is only the minority who understand them, specially words seldom used, and new fangled ones that are continually coming into use.

Reading a professional work recently, we were obliged so constantly to keep our dictionaries and lexicographies by our sides, and even then were so often beyond our depth that we finally complained to the author. He replied, "Yes, I know I use many words not in our lexicographies, for sometimes I could find no words yet coined sufficiently accurate for my purpose, and was therefore obliged to invent them." Then, of course, he should at least have accompanied his book with a glossary.

TALENT VS. GENIUS.

Talent is full of thoughts; genius is full of thought. Talent has definite plans and activities; genius has power that is an unknown quantity, and aims quite as indefinite. Talent has many ends in view, and prides itself on the extent of its vision; the aim of genius is concentrated, and its vision is narrow. Talent is cool, logical, convincing; genius is hot-headed, jumps at conclusions, and is often the laughing-stock of observers. Talent gains its ends by degrees, occupies its vantage ground with dignity, and is the commander of its situation; genius worms itself to its positions stealthily, knows no dignity and cares for no praise. Talent is the plodding investigator, the exhaustive student and the orator of the rostrum; genius is the alchemist, the close observer and the secret, cunning worker. Talent investigates the reason of things, prides itself on the logic of its conclusions, and avers a thing cannot be that does not accord with the rules of science; genius looks for the results, not the reasons for it; knows no logic but facts, and doubts nothing. The world would go awry if it was not for talent; but its progress is largely due to genius; its results are sometimes wonderful, quite surprising the credulity of talent, but accepted by the common people with gratitude.

But talent may be sleeping, and genius may spend its strength on nonsense. To be of use both must have a worthy purpose, and each must be guided and inspired by a motive that shall raise it above the miasma of lust and selfishness, or either will become poisoned and diseased, a curse to the world.

We all have some talent and some genius; so little of either, perhaps, that great exertion must be made if we would rise into any respectability and success. But we can use what we have, and use it to the utmost; then we shall not be pygmies, though we may not be giants; there will be many of shorter stature, though there will be some taller, and we shall have the consciousness of seizing every opportunity for self-development, though many may run past us.

KINDNESS.

No dentist can look for success without a kind heart. Our patients come to us for sympathy as well as relief, and if in place of refinement, delicacy, and kind heartedness they are met with coarseness, roughness and indifference, there is inevitable repulsion. They may submit once to what seems a necessity ; but if there is a kind, considerate, conscientious dentist anywhere to be found you will not be revisited.

And, yet, if a kindly disposition is not in our nature it cannot be assimilated. No hypocrisy will do here. The counterfeit will be detected instinctively. True kindness must come spontaneously from our very nature, and flow so sweetly as to be soothing nectar to troubled, anxious, fearful spirits.

If you have not such an overflowing fountain, and cannot by much labor change the desert of your nature into an oasis, then turn your attention to blacksmithing, but even then avoid horse-shoeing.

Especially must the dentist be kind to children. You may deceive grown people with blarney, but not children ; you may once betray their misplaced confidence, but not twice ; you may make it difficult for them to believe any dentist, but you will not be the gainer. A child shuns hardheartedness as cruelty ; repels harshness as wickedness, and resents deception as the unpardonable sin.

If by any means you have obliterated all your childish instincts ; if by the almighty dollar you have blinded your eyes to the loveliness of innocence ; if by perverseness you have perverted your nature, so that you are willing to crush the confiding trust of a little child to gain a momentary triumph,—remember that child is henceforth your enemy, and that enmity will grow with its growth, and, by and by, it will tell on your standing in the community and on your bank account.

GEORGE WATT, M. D., D.D.S.

Dr. Watt, whose portrait we present in this number, has been one of the leading dentists, in character and influence, in the West for many years. He is now 68 years of age. Though for many years an invalid of varying intensity, in fact from childhood being of weak frame, his Scotch blood has given him wonderful vitality and endurance.

He first graduated as a physician in 1848, and practiced in that profession. In 1852, he turned his attention to Dentistry and entered the office of Dr. J. Taft in Xenia, O. In 1854, he graduated in the Ohio College of Dental Surgery, and became immediately its Professor of Chemistry ; in fact, he was its Lecturer on Chemistry to the same

class of which he was a member before graduation. He then became partner with Dr. Taft, in Xenia, which continued some years.

Then he and Dr. Taft moved to Cincinnati, where they commenced the publication of *The Dental Register of the West*. They also maintained a lucrative dental practice. After some years, Dr. Watt's health failing, he returned to Xenia, where, by the aid of a younger and stronger partner, he re-entered the practice of dentistry. In 1860, at the outbreak of the Rebellion, his health having improved, he entered the Army as Surgeon. In 1884, having sustained a serious injury, he was retired, and he returned to the practice of dentistry in Xenia; but his injury was a serious embarrassment.

Since 1881, he has been of great service to the dental profession, as the honored editor of *The Ohio Journal of Dental Surgery*, though for most of this time he has been a great sufferer. His standing as a citizen and as a Christian is high. He is now 68 years of age.

GIVING CREDIT TO CONTEMPORARIES.

Dr. Catching, of the *Southern Dental Journal*, returns to the charge. He proves by our own admission that we do not always give credit for articles quoted from other journals, because we admit that we do not give credit to the journal from which we take short items of "conventional debates," though we give credit to the debater. Well, we are convicted. And we prefer to be, rather than to please a hypersensitiveness in this direction. For instance, suppose we quote the following remark, and add the source with the particularity our friend would have us:

I will give a Delmonico dinner to any one who will prove hypercementosis on a tooth that has never lost its occlusion.—Dr. Wm. H. Atkinson, in American Dental Convention, reported by the *Southern Dental Journal*.

It may please the vanity of the *Southern Dental Journal*, but it seems to us like making a long tail to our little kite. Then, too, five other journals each cries out: "That quotation was just as much from my journal as from the *Southern*; why did you make such an invidious distinction as to give only one journal as the source of your quotation?"

As we said in our December ITEMS: "When quoting short extracts from conventional debates, etc., found in different journals, we do not think it necessary to give credit to the reporter, but we do invariably to the author of the remark."

We do not say we have never made mistakes in giving proper credit, but we try to be careful, and will try to be still more careful in the future.

Dr. Catching seeks to fortify his grievance by calling in the aid of the editor of the *Archives of Dentistry*. This brother says we quoted an original article of Parson Shaw, of England, from his journal, without giving his journal credit. Now the truth is, we, and the *Archives*, quoted this article from an English journal.

The *Annual of Universal Medical Science* is to be a formidable undertaking. *The American System of Dentistry*, with its three large volumes, is quite a work. But in this medical science we have, besides Dr. C. E. Sajous as editor-in-chief, the concentrated efforts of no less than fifty-six associated editors and eighty-two constituting a corresponding staff, with others to be appointed. These professional gentleman are of every civilized country in the world. The work, when completed, is to constitute five volumes, of about five hundred pages each. It is to embrace the latest experience of the medical profession of all countries. The American editors compile the reports of the foreign staff, and this compilation is to be reduced to system and readable divisions by the immediate assistants of the editor-in-chief.

The name is not always significant of the character. One would suppose from the title of a journal published in Buffalo, that it was intended only as a catalog of goods; but no one can read this *Dental Advertiser* without feeling that they have been entertained at an intellectual feast. Every number is prepared with unusual discretion and skill.

Guilford on Nitrous Oxide is a concise little treatise, well worth careful perusal. The most experienced will find much to help them, and to the inexperienced it is almost indispensable. Sold by dental dealers.

Dr. B. L. Burns has a new hand-piece, which has several valuable features; it is attached as readily as putting a bit on a bit-stock; the force of the blow is given with a heavy hammer, instead of strong springs, while the force is regulated by a spring under the index finger.

Barbier, of Algiers, grows enthusiastic over his remedy for whooping-cough and croup. The precious mixture consists of phenate of soda, in syrup of mint. He gives it six times daily in the former disease, and many times oftener in croup.

Rectal and Anal Surgery, by Edmund Andrews, published by W. T. Keener, Chicago, is a masterpiece on that subject.

Miscellaneous.

FONETIC SPELLING.

[The following, from the *Speling Reformer*, seems to us much more sensible than our ordinary spelling. It is from the pen of its Editor, Mrs. Eliza Burnz.]

Surprize haz bin exprest at my strong advocasy ov fonetic speling. Alow me to relate the sercumstansez ov my convershon to this truth. Having bin a tēcher from the age ov 13, I had borne my share in the wērisum task ov atemting to reconcile the infant rēzn to the illogical tēching ov our speling buk. In the erly autum ov 1846 my fäther braut home the curent number ov the *Frenolojital Journal*. I woz standing by a table engajd in sum wūman'z wurt, but tük up the magazēn for a cursory glance at its contents before laying it aside for the evening's reding. My atenshon woz soon atracted by a brēt notice ov a new method of rīting which had bin resently invented, and which woz cald "Phonography." The prinsipal fēturez ov the new sistem wer givn: The ignoring ov the comon speling; the separating ov ēch wurd into its elementary soundz, and the asining ov a particular jeometrical sine, simpl in form and made with a single moshon ov the hand, to reprezent ēch element ov the spokn wurd.

In a few secondz the hole plan in its wunderful simpilisity and beuty unfolded before my mental vizon. I saw that wurdz ritn in fonografy wud form, az it wer, an egzact dageriotipe ov the spokn langūaje. I saw also az by a litning flash, the marvelus rezults which wud flo from such a reprezentashon ov thaut, when it shud becum the jeneral medium ov comunicashon. I persēvd the numeros and stil grāter blesingz which wud cum to al future jenerashonz, when the truth az it iz in fonetic sience shud be made the basis ov langūaje tēching. It woz az if a brite, clear lite asended from that paragraf, glanst on my bowd forehead, and strēmd abuv me, pērsing to the infinit. And bak on its shining pathwa sēmd to cum a vois which rote thēz wurdz into my sōl: "Here iz a prinsipl wurth the tēcher'z living and wurking for; the only royal rode to lerning." At that moment I felt and acnolejd this revelashon ov truth az a cal to me individualy to labor in this speshal fēld ov human culture. I hav never considerd that I had eny choice or wil in the mater; but naturaly, plezantly and stedily, with al my strength ov being, I hav wurkt tharin.

A recent writer inveighs against indiscriminate use of tea and coffee, especially in the young. He is of the opinion that against the practice of giving them to children we can not speak too strongly. Childhood is the period when the nervous activity is at its greatest. The brain is very busy in receiving new impressions. Reflex action, co-ordination of muscles, and the special senses are all under a constant course of training. The nervous system is pushed to its utmost capacity, and long is the list of victims that follow this overstimulation. In these little people, nothing but harm can come from the use of such cerebral stimulants as tea and coffee.—*Power and Transmission.*

EXERCISE IN THE TREATMENT OF HEART DISEASE.

For generations the main idea in the treatment of organic heart disease has been physical rest to diminish the labor of the damaged organ. We have been in the habit of prohibiting all forms of active labor to the sufferers from cardiac disease, and the principal of our treatment has been the unexpressed but ever present idea, accepted as a self-evident axiom, that perfect rest was the best means of securing muscular compensation. Professor Oertel's experiments and results have come with startling surprise on those who forgot to distinguish between a useful principal, and the exceptions which the multiformity of disease renders it imperative to recognize. As is well known, he treats a considerable proportion of cases of organic heart disease by regulated exercise, especially graduated ascents of mountains, and his results place the value of his method beyond reasonable dispute. There is nothing really surprising either in his treatment or the success which has attended it. A little reflection will suffice to convince us that, while rest is often useful, and indeed quite indispensable, in heart disease, there are yet many cases in which well regulated exercise will improve the nutrition of the cardiac muscle, as of the rest of the muscular system, and hence tend to the promotion of circulatory vigor.—*Medical Record.*

A NEW HEKTOGRAPH.

The latest issue of the *Papier Zeitung* gives the following instructions for making a cheap and handy hektograph: Soak 4 parts of best white glue in a mixture of 5 parts pure water and 3 parts ammonia, till the glue is thoroughly softened. Warm it till the glue is dissolved, and add 3 parts of granulated sugar, and 8 parts of glycerin, stirring well and letting it come to the boiling point. While hot, paint it on clean white blotting paper, with a broad copying brush, till the blotting paper is thoroughly soaked and a thin coating remains on the surface. Allow it to dry for two or three days and it is then ready for use. The writing or drawing to be copied is done with ordinary hektograph or aniline ink on writing paper. Before transferring to the blotting paper, wet the latter with a sponge or copying brush and clean water and allow it to stand one or two minutes. Place the written side down and stroke out any air bubbles and submit the whole to gentle pressure for a few moments, remove the written paper, and a number of impressions can then be taken in the ordinary way. When the impressions begin to grow weak, wet the surface of the hektograph again. This hektograph does not require washing off, but simply laying away for 24 to 36 hours, when the surface will be ready for a new impression.

Chilblains.—Dissolve 1 ounce ammonia chloride in $\frac{1}{2}$ pint cider vinegar, and apply frequently; $\frac{1}{2}$ pint alcohol may be added to this lotion with good effect.

Laundering cuffs and collars, to make them glossy. The simplest preparation consists of the following: Pour a pint of boiling water on 2 ounces of gum arabic, cover it, and let it stand over night. Use a tablespoonful of this.

A NEW ACID—PECULIAR PROPERTIES.

Mr. David Hooper, F.C.S., of Ootacamund, India, has extracted a new acid from the leaves of the plant known to botanists as *Gymnema sylvestre*. It is a plant of the family of Asclepiadæ, which grows in the Deccan Peninsula, Assam, and Africa, and it was found that, on chewing its leaves, all sense of the sweet taste of sugar disappeared as if by magic. For instance, if gingerbread were eaten, only the taste of the ginger was perceived; if a sweet orange, only the acid flavor of the citric acid, and the orange seemed as sour as a lime or a lemon. But what is still more curious, not only the sweet taste of substances containing sugar is effaced, but bitterness is also destroyed at the same time. Hence, if a person takes sulphate of quinine after chewing the leaves of the *Gymnema*, it merely tastes like so much chalk or plaster-of Paris. The effect in question lasts, as a rule, for one or two hours, and then the sense of taste returns to its normal condition. The active principle of the leaves of this plant appears to be soluble in water, alcohol, ether and benzol. The aqueous solution of the substances soluble in alcohol had a decided acid reaction, and the author extracted an acid from it not unlike chrysophanic acid in some respects, but different in others. To this new product he has given the name of *gymnemic acid*, and it possesses the anti-sweet and anti-bitter properties found in the leaves as described. The pulverized sun-dried leaves yielded about 6 per cent of their weight of this singular new product, about which we shall, no doubt, hear more in the course of a short time.—*Scientific American*.

DR. COGSWELL'S GENEROSITY.

“After all the gibes and guys that have been poured out on the Cogswell fountain, it is pleasant,” says the Boston *Transcript*, “on the abstract principle that one likes to have his estimate of human nature raised, that the Doctor and his wife have given a million dollars for the establishment of a technic school, where youths will be taught the mechanic arts gratuitously, in San Francisco.”

An Edition of the constitution of the United States, of which many copies were sold in this city during the celebration, last week, was found, when compared with a verbatim copy, to contain 1179 errors. The majority of these were very trivial, 877 being failures to capitalize words in the manner of the original instrument, and six being in the use of italic type instead of Roman. There were, however, 260 errors of punctuation, 17 errors in spelling, 17 errors in numbering paragraphs, one word omitted and another inserted. Yet the book was published by a generally very careful firm of law publishers.

The girls of the Normal School, Philadelphia, study a new branch of useful knowledge, that of cooking. For this purpose the Board of Education has an expert to teach the misses, all of whom, it is said, enter into it with considerable spirit.

It is not uncommon for men to be more ardently desirous of noble recompence, than studious to acquire the means of deserving it.